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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/786,361  | 02/26/2004  | Matthew E. Hansen    | 1857.1460001        | 3420             |
| 26111   | 7590        | 06/16/2005           | EXAMINER            |                  |
| STERNE, KESSLER, GOLDSTEIN & FOX PLLC<br>1100 NEW YORK AVENUE, N.W.<br>WASHINGTON, DC 20005 |             |                      | LEE, HWA S          |                  |
|   |             |                      | ART UNIT            | PAPER NUMBER     |
|   |             |                      | 2877                |                  |

DATE MAILED: 06/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

EF

|                              |                                      |   |  |
|------------------------------|--------------------------------------|---|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/786,361 | <b>Applicant(s)</b><br>HANSEN, MATTHEW E. |  |
|                              | <b>Examiner</b><br>Andrew Hwa S. Lee | <b>Art Unit</b><br>2877                   |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 April 2005.  
 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.  
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
 6) ☒ Claim(s) 1-26 is/are rejected.  
 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \* c) ☐ None of:  
         1. ☐ Certified copies of the priority documents have been received.  
         2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
         3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
     \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>4/20/05, 2/2/05</u> | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Remarks*

This Office Action is in response to Applicant's reply of 4/20/05. Claims 1-26 are pending. The Information Disclosure Statement of 4/20/05 has been considered.

### *Double Patenting*

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

1. **Claims 1-26** are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-28 of copending Application No. 09/339,506. Although the conflicting claims are not identical, they are not patentably distinct from each other because the difference in the claims is the use of different terms but are defined the same where claim 1 of 09/339,506 is combined with claim 10 of 09/339,506. For instance, "image of the plurality of periodic pattern" is the same as "an interference pattern."

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

2. **Claims 1-26** are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 40-57 and 60-64 of copending Application No. 09/907,902. Although the conflicting claims are not identical, they are not patentably distinct from each other in that the pending claims are broader. This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

3. **Claims 1-8** are rejected under 35 U.S.C. 102(e) as being anticipated by Kataoka et al (US 5,814,425 cited by Applicant in IDS of 5/5/04).

For **claim 1**, Kataoka et al (Kataoka hereinafter) show a method of measuring aberration of a projection optical system comprising:

illuminating (215) more than one periodic pattern (Figures 4 and 5) in an object (W) plane of the optical system;

using the optical system to image (for instance column 5, lines 22+) the periodic patterns onto an image volume and also where the image plane is angled at 0 degrees from the reticle plane (for instance column 5 lines 19+. In addition, the limitation of “an image volume” has not be set forth to where the boundaries of the volume is, nor to exclude a simple plane.);

analyzing an interference pattern in an image of the periodic patterns formed within the image volume (108, column 4, line 51 to column 5, line 11 and column 5 lines 23+) , whereby optical system characteristics are determined from the interference pattern.

With regards to **claims 2-7** , please see Figure 4.

### ***Response to Arguments***

With respect to argument regarding claims 1-8, the examiner agrees that pending application contain features similar to the allowable subject matter of co-pending application 09/339,506, however it is the opinion of the examiner that the limitation of “an image volume” has not be set forth to where the boundaries of the volume is, nor to exclude a simple plane. And in the instance of a simple plane, Kataoka meets the limitations as presently claimed.

### ***Conclusion***

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**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Hwa S. Lee whose telephone number is 571-272-2419. The examiner can normally be reached on Tue-Fr.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley Jr. can be reached on 571-272-2800 ext 77. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'A. Hwa Lee', with a stylized flourish at the end.

Andrew Hwa Lee  
Primary Examiner  
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